

Intelligent and creative façade design

**How to link  
colour with  
function.**

# More than just a façade

Façade paints and renders offer endless possibilities in terms of creativity. In addition, they protect the building from the effects of the weather and pollutants in the air. However, the appearance and functionality of the façade deteriorates over the years, depending on the location of the building, the surrounding environment and how well the building has been maintained.

The intelligent façade paints and renders from Sto counteract these hazards from as early as the new build stage, through to the refurbishment of existing buildings. It's also well worth considering a façade insulation system such as StoTherm Classic®, which provides complete protection and design freedom, in addition to dramatically reducing heating costs, whilst protecting the environment.

For those who want more

## Innovative façade paints with added value

Modern façade paints don't just bring colour to the façade. They also protect your building from a variety of stresses and influences such as the weather, age, wear and UV radiation. Environmental influences also pose enormous challenges for façades, but façade paints from Sto can help you to overcome these hurdles. They ensure optimum protection, colour stability and durability. Depending on its composition, a façade paint can offer valuable properties

which provide significant additional advantages. Take for example the façade paints in the iQ - Intelligent Technology paint generation from Sto. With their special ingredients and formulations, they are used to create additional surface functions which significantly add value to the façade. In the following pages, we will show you the benefits of advanced façade paints, and the right solution for your project.

### The requirements placed on a façade

1. Quick drying façades
2. Façades that stay clean for longer
3. Special protection against algae and fungi
4. Dark colour shades that reflect heat
5. Colour brilliance/intense colour shades
6. Mineral/silicate surfaces
7. Reduction of harmful substances



# 1. Dry façades

## StoColor Dryonic G

This intelligent façade paint guarantees that the façade dries quickly after rain, fog and dew formation. Microorganisms are unable to grow on the dry surface and any staining or marking is dramatically reduced compared to a conventional façade finish. The result: dry and beautiful façades that stand the test of time.

The inspiration for the StoColor Dryonic façade paint was the fog-basking beetle. Just like the beetle's shell, the paint has micro-textures that both repel and channel water at the same time. This innovative Dryonic Technology allows water on the façade resulting from rain, dew and fog to run off almost instantly. The best ideas often come from nature. And from Sto.



Private Residence, Czech Republic



The shell of the fog-basking beetle was the inspiration for the façade paint StoColor Dryonic.

### StoColor Dryonic

**Beautifully dry, come what may.**  
The new façade paint with Dryonic Technology for façades that dry in no time at all - and in any climate.

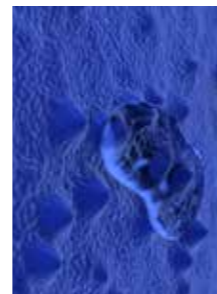
- At a glance:**
- Quick drying after rain and dew formation
  - Protection against algae and fungi growth
  - Wide variety of colours and high level of colour stability
  - Minimal breakdown of filler material - not easily marked
  - Application to all conventional construction substrates

**Classes in accordance with EN 1062-1:**

- Water vapour diffusion: V2 (medium)
- Water permeability: W3 (low)
- CO<sub>2</sub> permeability: class C1 (inhibiting)



Shell surface



StoColor Dryonic surface



Dry façades	
Recommended paints	StoColor Dryonic G

# 2. Façades that stay clean for longer

## StoColor Lotusan® G

For aesthetic reasons, modern architecture often chooses to go without the tried-and-tested protection offered by a projecting roof. Yet with StoColor Lotusan®, algae, fungi and dirt don't stand a chance.

In addition to excellent properties in terms of building physics, StoColor Lotusan® façade paints incorporate the unique Lotus-Effect® Technology. This involved transferring the natural self-cleaning effect of the lotus plant – the lotus effect – to modern façade coatings. Rainwater runs off the lotus plant in droplets, taking all the dirt particles on the surface with it. On the façade, this effect guarantees active, moisture-regulating weatherproofing. The result: dirt runs off with the rain and the façade stays clean and attractive for longer.



Queen Elizabeth University Hospital, Glasgow

### StoColor Lotusan®

**Dirt runs off with the rain.**  
The tried-and-tested façade paint with Lotus-Effect® Technology for façades that stay clean for longer.

- At a glance:**
- Maximum resistance to soiling
  - Natural protection against algae and fungal attack
  - Moisture-regulating

**Classes in accordance with DIN EN 1062-1:**

- Water vapour diffusion: V1 (high)
- Water permeability: W3 (low)



Façades that stay clean for longer	
Recommended paints	StoColor Lotusan® G



### 3. Special protection against algae and fungi

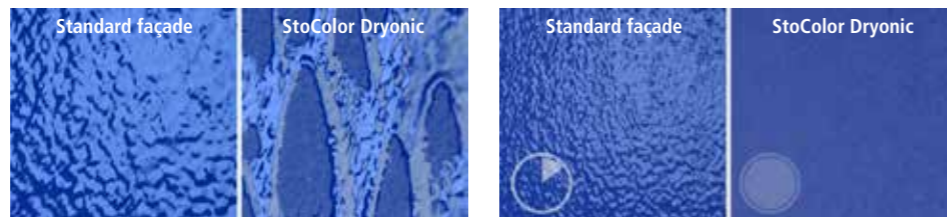
StoColor Dryonic G, StoColor Lotusan® G, StoColor Silco G

**Façades that are subjected to a particularly high level of stress require strong protection. Be on the safe side with StoColor Dryonic G, StoColor Lotusan® G and StoColor Silco G.**

Algae and fungi are born survivors who know how to adapt. Due to environmental factors and the location of the building, some façades are more affected by algae and fungal attack than others. In such cases, Sto is on hand with the tried-and-tested products: StoColor Dryonic G, StoColor Lotusan® G and StoColor Silco G are equipped with encapsulated film protection, making them the ideal solution. This environmentally-friendly technology extends durability, meaning that the paint remains effective and façades can remain pristine for longer.



**StoColor Dryonic comparison test: absolutely impressive.**



**Conventional façade coating**



In contrast, on conventional façade coatings, dirt particles form a deposit on the surface.

The surface is less hydrophobic and can therefore become wet more easily. Dirt particles cling to it.

**Dual function of façade coatings with Lotus-Effect® Technology**



**Feature 1:** Lotusan® has a microtextured surface. This means the contact area for dirt particles and water is significantly reduced.

**Feature 2:** The surface is also highly hydrophobic. Raindrops run off straight away and simply take the loose dirt particles with them.

**Special protection against algae and fungi**

Recommended paints

StoColor Dryonic G  
StoColor Lotusan® G  
StoColor Silco G

### 4. Microorganisms on façades

**Algae and fungi are examples of microorganisms and their growth depends on water, nutrients and, in the case of algae, light.**

**Not of all these elements can be influenced by us, but the level of moisture can be influenced by the construction and choice of material.**

**Algae and fungi on façades do not constitute damage and can generally be washed off with water. However, to ensure a building stays clean, attractive and free from algae, then preventative measures can be taken during the design stage and when refurbishing an existing building.**

Moisture has to be diverted away from the façade as quickly as possible and should be prevented from getting onto or into the façade at all. Roof projections, well-directed water flow and sufficient distance between the façade and trees or bushes all can help to reduce moisture.

However, the choice of render and façade paints are also being used more and more as protection against algae and fungi.

Using selected raw materials to develop product properties that are based on physical processes, Sto's iQ - Intelligent Technology paints help the façade to:

- absorb as little water as possible
- retain no water
- allow water to drain away
- dry as quickly as possible
- prevent algae growth
- stay clean and attractive for longer





## 5. Dark colour shades that reflect heat

### StoColor X-black

Direct sunlight heats up dark-coloured façades to a considerable extent. That's why in the past, strong colours could not be used on EPS insulation boards. But now with StoColor X-black, new design options are finally coming to light.

Thanks to Sto's X-black Technology, the heat-reflective façade paint is able to keep temperature peaks caused by solar radiation reliably below 70 °C. This is made possible by innovative NIR (near-infrared) black pigments, which simply reflect a large proportion of solar energy. To guarantee high binding strength and colour stability, the matt façade paint is based on 100% pure acrylate. This provides optimum protection for the façade against discolouration, chalking and crack formation.



EDEKA Hieber, Germany

**StoColor X-black**

**Strong paints for cool façades.**  
The façade paint with X-black Technology for intense-coloured and cool façades.

**At a glance:**

- Reflects the near-infrared spectral region of solar energy
- Wide variety of colours and high level of colour stability
- Ideal for dark colour shades
- Dark colour shades with low light reflectance on EPS

**Classes in accordance with DIN EN 1062-1:**

- Water vapour diffusion: V2 (medium)
- Water permeability: W3 (low)



Dark colour shades that hardly heat up	
Recommended paints	StoColor X-black



## 6. Brilliant and intense shades of colour

### StoColor Dryonic G

Anyone building or refurbishing a building wants more than just a permanently clean and attractive façade. The building should also feature an expressive design to be truly individual. Façade design primarily means colour design. StoColor Dryonic meets the highest standards of colour stability and offers a vast range of colour shades and brilliance.

StoColor Dryonic manages to combine both freedom of design and functionality. The texture-retaining paint impresses with its exceptional drying power and is available in virtually all colour shades. Its large variety of colours provides a huge number of colour design options – whether pure white, soft pastels or dark, intense tints with a high level of colour stability.



Residential building, Germany



Brilliant and intense shades of colour	
Recommended paints	StoColor Dryonic G



## 7. Mineral/silicate surfaces

### StoColor Sil

Every building is different. Historic buildings in particular require specially tailored solutions – not least for their façades. StoColor Sil helps preserve the historic appearance of such buildings perfectly.

StoColor Sil is a texture-retaining silicate paint which is ideally suited to historic buildings with mineral substrates.



Municipal office, Czech Republic



#### Mineral/silicate surfaces

Recommended paints	StoColor Sil
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The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

## 8. Reduction of harmful substances

### StoColor Photosan

We all need clean air, all our lives. It is therefore particularly alarming that the air in our industrialised world is becoming more and more polluted by harmful substances and particles. These have a negative effect on our quality of life and health.

The unique façade coating StoColor Photosan actively combats environmental pollution: the surface-active paint effectively reduces the formation of particles, and independently breaks down nitrogen oxides and ozone pollution. This is made possible by patented VLC Technology (visible light catalyst) which guarantees the continuous degradation of harmful substances.



#### Reduction of harmful substances

Recommended paints	StoColor Photosan
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The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

#### StoColor Photosan

A clever solution for clean air.

The façade paint with patented VLC Technology (visible light catalyst) for reduced particles and cleaner air.

At a glance:

- High level of protection against algae and fungal attack
- Works both under direct sunlight and in diffused lighting conditions such as on a north side or under heavy cloud

Classes in accordance with DIN EN 1062-1:

- Water vapour diffusion: V1 (high)
- Water permeability: W3 (low)

iQ – Intelligent Technology

## Intelligent façade paints by Sto



The brand iQ - Intelligent Technology delivers improved function through optimised product properties. Using special ingredients and formulations, the Sto façade paints in this generation create surfaces which can look after themselves. This makes functions possible which go far beyond just colouring.

The paints keep façades permanently dry and attractive, reduce harmful substances from the air, ensure that dirt runs off with the rain and façades do not heat up under intense solar radiation. These properties make them far superior to conventional façade paints.



### StoColor Dryonic

Microorganisms can settle when the façade is permanently wet, for example from rain, dew or fog. StoColor Dryonic helps prevent these organisms from settling.

Dryonic Technology ensures that dew or rainwater drains off in record time so that the façade can dry as quickly as possible. Algae and fungi do not stand a chance.



### StoColor Photosan

The air in our industrialised world is becoming increasingly polluted by harmful substances. StoColor Photosan actively combats environmental pollution: the paint, with patented VLC Technology, effectively breaks down nitrogen oxides and ozone pollution, thereby reducing the build-up of particles. A sustainable and effective concept for fresher air – confirmed by external reports.



### StoColor X-black

Dark surfaces attract heat when exposed to direct sunlight. Overheated façades, crack formation or building element expansion are the potential consequences. StoColor X-black removes virtually all thermal limits when it comes to the colour design of buildings. The paint reflects solar radiation and keeps the temperature reliably below 70 °C.



### Lotusan®

Equipped with the unique Lotus-Effect® Technology, the Lotusan® paint protects façades from algae and fungi in a sustainable way. The microtextured and hydrophobic surface maintains an extremely small contact area for dirt and water. The dirt particles, which are loosely adhered to the surface, are simply carried away by the rain.



Design variety

## The wall of infinite possibilities

Of course, when it comes to creativity, paint and render are at the top of the agenda. And rightly so. The StoColor System alone offers a selection of 800 colour shades,

along with a wide variety of surface textures. But there are also many more possibilities: from natural stone to resin brick slips; to decorative profiles. This variety can be

brought to life perfectly when combined with the StoTherm Classic® external wall insulation system. Even intense colours are possible – just ask a Sto Applicator.

## Good reasons to go to a Sto Applicator

Sto products are exclusively applied by qualified applicators. Only their expertise can guarantee that all Sto products are installed and applied to a very high standard, ensuring that you will be enjoying your investment for a very long time. The Applicator can also provide you with supporting advice and information regarding a refurbishment project or a new build. Please contact Sto on **0141 892 8000** for details on **Sto Authorised Applicators**.





## Façade paints

## It's about the bigger picture

What if we all wore only white clothing? What a boring world it would be. Yet despite this, we apply this uniform principle to most of our buildings. But there is almost no end to the possibilities for making a building unique, yet in a tasteful and attractive way.

The important thing here is that the choice of colour for a building can never be isolated from factors such as architecture, neighbouring buildings and the landscape. An attractive colour recommendation can only be determined once this context is accounted for.

Particular value should also be placed on the interaction between the roof and façade, as well as the windows and railings.



1. White wall; red roof - this is a classic colour combination for a new building. Owing to the strong contrast, the heavy roof appears to float over the building. The overall effect of the building is neutral, with the combination of white windows.



2. The façade is similar in brightness and colour to the roof. The overall effect of the building is compact, but tends to be monotonous. Brighter partial surfaces such as window surrounds can add a positive touch.



3. Complementary colour combinations such as red and green form an interesting area of interplay. With fully saturated tints, this can easily become too colourful. Neutral partial surfaces provide a subtle effect. If there is lots of vegetation around the building, the choice of intense green should be avoided.



4. A dark grey roof gives a heavy, stable appearance to the building. In this case, it is advisable to choose an intense colour for the façade as well. But if the roof is light grey, it is usually too delicate for an intensely coloured façade. To create a harmonious overall impression, the colours of the façade should reflect the appearance of the other building elements.



5. Combined with a pastel colour shade, a light grey roof is pleasantly delicate and inviting. In contrast with the red roof, the grey is a colour-neutral accompaniment to the façade colour. As a result, it is worth using details such as railings as colour accents.



### Systematic creativity: the StoColor System

With the StoColor System, the focus is on people: the colour shades are geared to the human perception of colour, rather than to any strict colour slide. On the basis of the colours yellow, orange, red, purple, blue and green, is a selection of 800 different colour shades, which provides for limitless creativity.







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